

REMARKS

Claim 1 has been amended in order to respond to the Examiner's rejection under 35 USC 112, second paragraph. Specifically speaking, the currently presented claims now recite that when the silane coupling agent containing an imidazole group is obtained by a reaction of an imidazole compound and 3-glycidoxypolytrimethoxysilane, it has a hydroxyl group in its molecule, and it does not have a hydroxyl group in its molecule when it is obtained by a reaction of an imidazole compound and 3-methacryloxypropyltrimethoxysilane. No new matter has been added. It is respectfully submitted that this amendment has overcome the Examiner's rejection of the claims under 35 USC 112, second paragraph.

Claims 1-3 and 5-9 have been rejected under 35 USC 103(a) as being unpatentable over Takei et al in view of Kumagai et al. Claims 1-3 and 5-9 also have been rejected under 35 USC 103(a) as being unpatentable over Takei in view of Kumagai '094. Applicants respectfully traverse these grounds of rejection and urge reconsideration in light of the following comments.

The presently claimed invention is directed to a resin composition comprising the following components as essential ingredients, (A) a polyol, (B) a polyisocyanate and (C) a silane coupling agent containing an imidazole group. The ratio NCO/OH of the number of isocyanate groups and the polyisocyanate (B) to the number of hydroxyl groups and the polyol (A) in the composition is from 0.6 to 4.0 and the weight ratio of ((A)+(B)):(C) is from 100:0.01 to 100:10. The silane coupling agent containing an imidazole group (C) is either obtained by a reaction of an imidazole compound and 3-glycidoxypolytrimethoxysilane or a reaction of an imidazole compound and 3-methacryloxypropyltrimethoxysilane and has a hydroxyl group in its molecule when it is obtained by a reaction of an imidazole compound and 3-glycidoxypoly-

trimethoxysilane and does not have a hydroxyl group in its molecule when it is obtained by a reaction of an imidazole compound and 3-methacryloxypropyltrimethoxysilane.

As pointed out in previous Responses, the instant invention provides a resin composition which avoids the side-effects associated when using a tertiary amine compound as a catalyst with respect to unpleasant odors and high volatility. The present invention provides a resin composition that promotes the curing of a reaction product between a polyol and a polyisocyanate and improves their adhesion to metals, inorganic materials and organic materials. It is respectfully submitted that the presently claimed invention clearly is patentably distinguishable over the prior art cited by the Examiner.

The Takei et al reference discloses the polymerization of a vinyl-based monomer in the presence of an alcohol having no addition-polymerization reactivity through the use of an initiator consisting essentially of a peroxide and at least one catalyst selected from the group consisting of an organic sulfonic acid compound having no addition-polymerization reactivity and an inorganic acid. As admitted by the Examiner, this reference does not disclose the use of the claimed silane coupling agent containing an imidazole group.

Kumagai et al discloses an imidazole/organic monocarboxylic acid salt derivative reaction product for improving the adhesion between a resin and a metal, such as copper, steel or aluminum, or an inorganic material, such as a glass fiber, silica, aluminum oxide or aluminum hydroxide. The imidazole/organic monocarboxylic acid salt derivative reaction product is obtained by reacting an imidazole compound with a silane compound and subsequently reacting with an organic monocarboxylic acid. However, the silane coupling agent of the present invention is limited to being prepared by a reaction of an imidazole compound and 3-glycidoxypipropyl-trimethoxysilane or 3-methacryloxypropyltrimethoxysilane. The organic monocarboxylic acid reactant of this reference is

expressly excluded from the presently claimed invention. As such, it is respectfully submitted that the presently claimed invention is patentably distinguishable over Takei et al in view of Kumagai et al.

Kumagai '094 discloses an organo silicone compound useful as a surface treating agent for improving the adhesion of a metal, such as copper, steel or aluminum, or an inorganic substance, such as glass fibers, silica, aluminum oxide or aluminum hydroxide, to a resin. However, as pointed out previously, Kumagai et al '094 does not disclose the addition of a silane coupling agent containing an imidazole group to a polyol and a polyisocyanate. Although Kumagai '094 discloses that the additive there can be added to a product resin, such as an epoxy or polyurethane resin, there is no suggestion that this additive would be used in the reaction to form the product resin. As pointed out previously, there is no suggestion in any of the references cited by the Examiner that a reaction would even occur between a polyol and a polyisocyanate in the presence of the silane coupling agent of the present invention. If the Examiner can present caselaw which establishes that it is obvious to add a component to reactants that make up a resin product and add that same component to the resin reaction product of the reactants, he is respectfully requested to provide it. Alternatively, if the Examiner can show where the same results are obtained by adding a component to reactants that form a resin as it is to adding a component to the resin reaction product, he is requested to provide that also. As such, unless the Examiner can show some sort of equivalence between reactants and the product of those reactants, it is respectfully submitted that a showing of *prima facie* obviousness under 35 USC 103(a) has not been made.

Reconsideration of the present application and the passing of it to issue is respectfully solicited.

Respectfully submitted,


Terryence F. Chapman

TFC/smd

FLYNN, THIEL, BOUTELL
& TANIS, P.C.
2026 Rambling Road
Kalamazoo, MI 49008-1631
Phone: (269) 381-1156
Fax: (269) 381-5465

David G. Boutell	Reg. No. 25 072
Terryence F. Chapman	Reg. No. 32 549
Mark L. Maki	Reg. No. 36 589
Liane L. Churney	Reg. No. 40 694
Brian R. Tumm	Reg. No. 36 328
Heon Jekal	Reg. No. 64 219
Eugene J. Rath III	Reg. No. 42 094
Dale H. Thiel	Reg. No. 24 323
Sidney B. Williams, Jr.	Reg. No. 24 949

Encl: Postal Card

136.07/05